



State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-3406 FAX (603) 271-7894



November 4, 2003
Letter of Deficiency
DSP#03-052

Ms. Linda Christie
Town of Alstead
Vilas Pool Committee
P.O. Box 60
Alstead, NH 03602-0060

RE: Vilas Pool Dam #005.06, Alstead

Dear Ms. Christie:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on September 18, 2003. During this visual inspection and/or file review, the following deficiencies were observed:

There was deterioration of the 1982 mortar facing added to the dam in the following locations:

- a. Upstream face of the left abutment wall;
- b. Entire spillway face;
- c. The crack noted in 1979 photos running completely through the left abutment is visible. This crack has been sealed in the past. This crack was measured as having a 3/4" displacement. Mr. Crosby was shown the displacement and instructed on how to monitor and record any changes;
- d. The right concrete abutment wall, both upstream and downstream, showed signs of concrete deterioration and cracking of the gunite coating;
- e. The interface between the right spillway training wall and the spillway showed signs of concrete damage from scour;

There was seepage noted from the old 24-inch outlets in the face of the dam. These outlets were plugged in 1982;

3. The low level gate is difficult to operate;
4. The dam cannot pass the 100 year storm event without overtopping Route 123;
5. The emergency action plan (EAP) needs to be tested; and
6. There is no operation and maintenance plan (O&M) on file with the DES.

Letter of Deficiency
Dam#005.06/DSP#03-052
November 4, 2003
pg. 2

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

January 1, 2004:

1. Complete a written O&M plan to the DES for review. The plan should describe the control of impoundment levels, monitoring and maintenance procedures, and identify emergency contact personnel. Refer to the enclosed guidelines;
2. Complete a test of the EAP notification flowchart. If you have any questions relative to the procedure for conducting the test please contact Bethann McCarthy, P.E., EAP Coordinator at 271-3406;

December 1, 2004:

3. Repair the cracking concrete surfaces in the following locations:
 - a. Upstream face of the left abutment wall;
 - b. Seal the crack running completely through the left abutment until a more permanent solution is found (see item #4);
 - c. The right concrete abutment wall, both upstream and downstream;
 - d. The interface between the right spillway training wall and the spillway;
4. Secure the services of a consulting engineer to investigate and design modifications to the dam to address the following:
 - a. The inadequacy of the dam to safely pass the 100-year flood event without causing overtopping of Route 123;
 - b. The poor operability of the low level gate;
 - c. The structural cracking through the left concrete abutment wall; and

On a continuing basis:

5. Monitor the crack running completely through the left abutment. This crack was measured as having a 3/4" displacement. Notify this office if any changes occur

As a result of this scheduled inspection, file review and dam breach analysis, DES has determined that there would be flooding of residences downstream which would not be above the first floor elevation. As a result of this finding, DES has determined that a more appropriate hazard classification for this dam would be a significant hazard B rather than a high hazard C structure. This change in hazard classification will reduce your annual dam registration fee from \$600 to \$300. The inspection schedule will be on a four year rotation verses a two year rotation.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. Please call or write to our office if the repairs are completed before the aforementioned schedule. We have enclosed a self addressed stamped envelope for you to return this form.

Letter of Deficiency
Dam#005.06/DSP#03-052
November 4, 2003
pg. 3

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at 29 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095.

Sincerely,

COPY
Grace E. Levergood, P.E.
Dam Safety Engineer

Attachments Guideline for an O&M plan, DB13

cc: Gretchen Rule

Bethann McCarthy, P.E., EAP Coordinator

Certified # 7000 1670 0000 0586 26 9

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